

Sandstrom '766 to supplement the deficiency in the disclosure of Wideman '133 (page 4 of the Final Office Action dated January 24, 2005).

Wideman '133 discloses a pneumatic tire with a rubber tread which utilizes from about 1 to about 40, alternately about 3 to about 10 phr of a liquid alpha-methyl styrene oligomer (col. 2, lines 20-23). Wideman '133 is directed to improving the gripping performance at a wide temperature region and discloses on column 2, lines 43 to 52 that a given amount of liquid alpha-methyl styrene oligomer reduces low strain stiffness which tends to give improved traction at lower temperatures.

On the contrary, the present invention is directed to simultaneously improving the wet performance and the wear resistance in a rubber composition comprising a blend of butadiene rubber and styrene-butadiene copolymer rubber by adjusting a blending ratio of the butadiene rubber and a bound styrene content styrene-butadiene copolymer rubber while considering the influence upon the other performances accompanied therewith (page 1-2, [0006]). Applicants' claimed rubber composition comprises a rubber component comprising not less than 40% by weight of a butadiene rubber and styrene-butadiene copolymer rubber (page 2-3, [0016]). If the amount of butadiene rubber exceeds 60% by weight, a workability, particularly a workability during the kneading and extruding of the rubber is degraded (page 3, [0017]). Additionally, if the bound styrene content becomes too large, the wear resistance is damaged (page 3, lines 12-15).

Additionally, when the butadiene rubber is increased in the rubber component containing a blend of butadiene rubber and styrene-butadiene copolymer rubber while maintaining a styrene amount in the rubber component at a constant level, the processability of the resulting rubber

composition is deteriorated (page 3-4, [0019]). Generally, an improvement in processability has been carried out by increasing an amount of an oil compounded in the rubber composition (page 3, [0019]). However, increasing an amount of an oil compounded in the rubber composition lowers the hardness at a low strain region, and when such rubber composition is applied to a tread of a tire, a rigidity of a block formed on the tread surface lowers and the wear resistance is degraded (page 3, [0019]).

On the contrary, in the present invention, a resin is compounded in the rubber component instead of increasing the amount of aromatic oil and thus an improvement in processability can be obtained while maintaining the hardness at the low strain region to a given level is maintained. (page 3-4, [0019]). Neither Wideman '133 or Sandstrom '766 teach or suggest adding a constant amount of resin instead of increasing an amount of an aromatic oil. Further, Applicants submit that a resin compounded in the rubber component in an amount of 4-10 parts by weight based on 100 parts by weight of the rubber component provides superior effects which are not disclosed or suggested by Wideman '133 and Sandstrom '766.

Accordingly, there is no suggestion that the effects of the present invention are attained by applying the styrene-butadiene copolymer rubber and the butadiene rubber ratio disclosed in Sandstrom '766 to the pneumatic tire disclosed in Wideman '133.

Additionally, with respect to claim 6, the compounding ratio of carbon black to silica in the mixed filler is not disclosed in Sandstrom '766. On the other hand, in column 4, lines 35-43, Wideman '133 discloses that the amount of carbon black is 60-140 phr and the amount of silica is 10-20 phr. However, the ratio of carbon black to silica of 45/20-30/35, as defined in the present invention, is not disclosed or suggested from Wideman '133 or Sandstrom '766.

RESPONSE UNDER 37 C.F.R. § 1.116
U.S. Application No. 10/046,205

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Further, as mentioned in detail in the specification of the present invention, carbon black has an effect on the wear resistance and silica has an effect on the wet performance. Thus, the ratio of carbon black/silica contribute to the superior effects of the present invention.

In view of the foregoing, Applicants respectfully submit that the presently claimed invention would not be obvious over Wideman '133 in view of Sandstrom '766. Accordingly, Applicants respectfully request that the Examiner reconsider and withdraw the rejection.

In view of the above, reconsideration and allowance of this application are now believed to be in order, and such actions are hereby solicited. If any points remain in issue which the Examiner feels may be best resolved through a personal or telephone interview, the Examiner is kindly requested to contact the undersigned at the telephone number listed below.

The USPTO is directed and authorized to charge all required fees, except for the Issue Fee and the Publication Fee, to Deposit Account No. 19-4880. Please also credit any overpayments to said Deposit Account.

Respectfully submitted,

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Date: May 24, 2005